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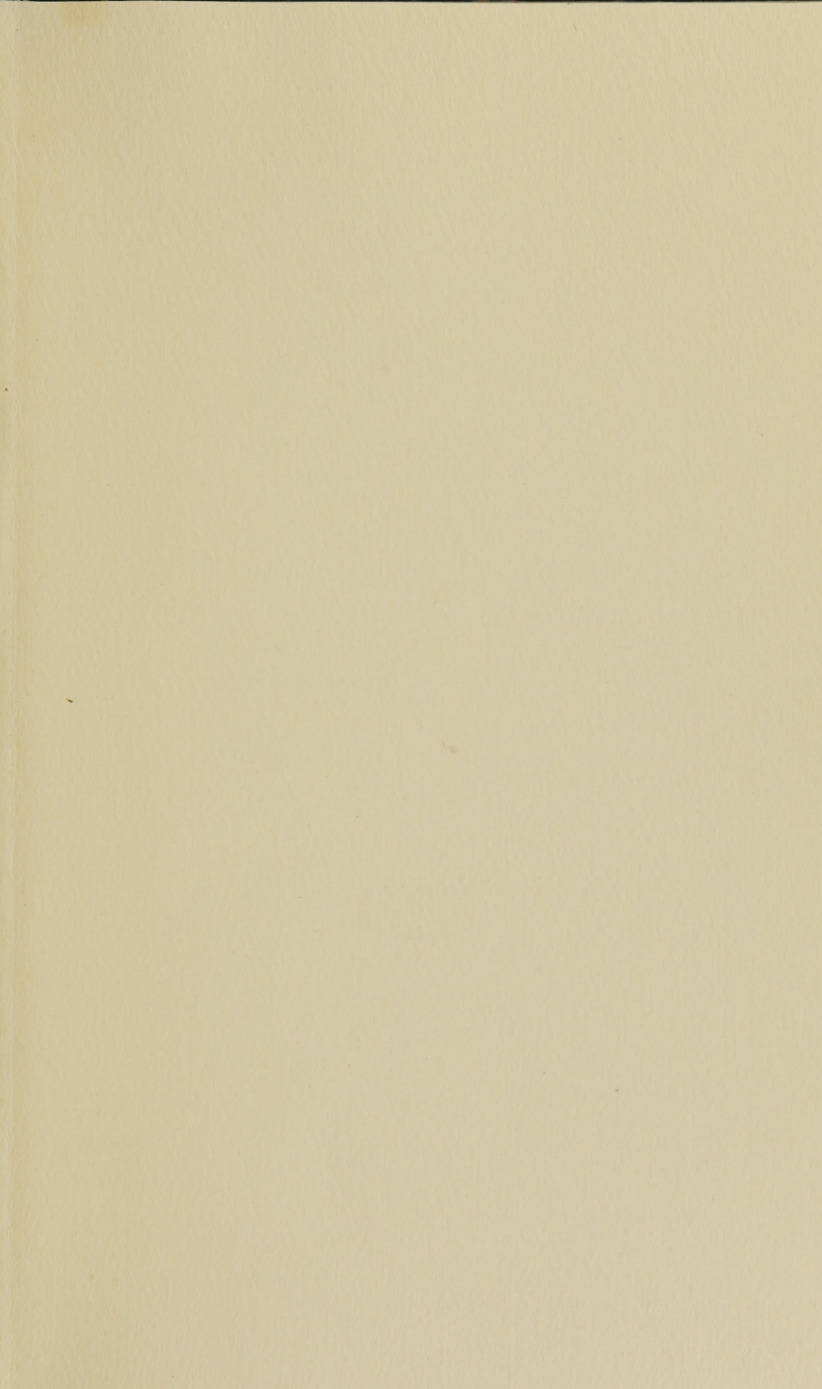
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AN
INAUGURAL DISSERTATION,
BEING
AN ATTEMPT
TO
on PROVE THE IDENTITY
OF
GOUT AND RHEUMATISM.
SUBMITTED TO
THE EXAMINATION OF THE
REV. JOHN ANDREWS, D. D. PROVOST
(PRO TEMPORE),
THE
TRUSTEES, AND MEDICAL FACULTY
OF THE
UNIVERSITY OF PENNSYLVANIA,
ON THE 21ST DAY OF APRIL, 1806,
FOR THE
DEGREE OF DOCTOR OF MEDICINE.

BY CHARLES COCKE,
OF VIRGINIA.

The science of Medicine should be kept as clear of miracles as possible.

PROFESSOR BARTON.

Simplicitas rarissima, in ^{ae} vo nostro.

T. L.

PHILADELPHIA,
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116, HIGH-STREET.

1806.

TO
JOSEPH EGGLESTON, ESQ.
OF VIRGINIA.

DEAR SIR,

EVERY sentiment of gratitude and affection which can be inspired by acts of disinterested friendship I shall ever feel towards you. I regard you as a second parent, to whose anxious attention to my welfare I owe every advantage of my life. No care, no effort, that might tend to my future good, has ever been neglected by you. In return for your paternal care, I can offer nothing but an assurance of an attachment truly filial.

With unfeigned wishes for your future health and happiness, I subscribe myself

Your grateful friend and nephew,
CHARLES COCKE.

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JAMES JONES, M.D.
BENJAMIN JONES, M.D.

ON PROSTATE

INSTITUTIONAL AND CLINICAL OBSERVATIONS

I have leave to declare to you that the results of a series of
experiments conducted under your direction, I have the honor to
transmit to you herewith, and to request that you will be so good
as to forward them to the proper authorities for their consideration
to your satisfaction.

As soon as my return to the institution for the study of
prostate disease, I shall be glad to have the opportunity of
discussing the results of the experiments, and to receive your
advice and suggestions. I am, Sir, very respectfully,
Yours, Sir, very truly,
JAMES JONES, M.D.

Enclosed find a copy of the report and a copy of the
report of the committee on the subject of the treatment of
prostate disease.

Very truly,
JAMES JONES, M.D.

TO
BENJAMIN RUSH, M. D.
PROFESSOR OF THE
INSTITUTES AND PRACTICE OF MEDICINE
IN THE
UNIVERSITY OF PENNSYLVANIA.

SIR,

NEITHER ambition nor self-interest induced me to affix your name to this essay; for, important as is the sanction of your name, it cannot cover the many imperfections of this hasty production. It was a desire to manifest my high respect for your talents as a physician, my esteem for your private character, and my gratitude for the many favours conferred on me, that have prompted me to this dedication.

That you may long live to disseminate the important principles of medicine discovered by yourself, is the wish of none more ardently than of

Your sincere friend and pupil,
THE AUTHOR.

TO

BENJAMIN RUSH, M. D.

RECEIVED OF THE

INSTITUTION FOR THE IMPROVEMENT OF THE MIND

IN THE

UNIVERSITY OF PENNSYLVANIA

INTRODUCTION.

WHEN I commenced this essay, I expected to confine myself to the immediate subject of it. That this has not been the case, will be at once discovered by the reader at all conversant with medical matters. He will perceive that the *general* subject of nosology is often touched upon, and that attempts are even made to refute some of its principles. These things, being somewhat of a collateral nature, it must be acknowledged are not quite irrelative to the subject of this dissertation: for it is on the deep-seated prejudices in favour of nosology that the objections to the sameness of gout and rheumatism are founded; to think then of removing the latter, while the former retained its full influence, would be a vain expectation. From this consideration, therefore, I have thought fit occasionally to discuss the merits of the nosological arrangement of diseases. And here I must hope to be rightly understood. I have not attempted to enter fully into the merits and defects of nosology; to treat this subject as its importance deserves would require more time and ob-

servation than I can possibly have had, and greater abilities than I have the vanity to claim. Every thing, then, touching on nosology must be understood as having a *partial* application. It is intended to prove the *sameness* of gout and rheumatism, not to refute the *general* doctrine of nosology.

AN

INAUGURAL DISSERTATION, &c.

AS the establishment of every opinion in medicine should rest on matters of fact, and not speculation, I shall on every occasion prefer to give the support of the former to the principles that I shall attempt to defend. This, therefore, must be my apology for the numerous quotations contained in this essay.

Those who have been fond of discriminating between gout and rheumatism, from the diversity of their causes, have blindly considered intemperance in eating and drinking as the only remote cause of gout. As well might they assert that a cargo of putrid coffee was the only source of yellow fever, because it has sometimes produced it. Intemperance is only one of a hundred causes of gout.

“Dr. Harle*,” says his biographer, “could never from his infancy taste any kind of fermented or spiritous liquors. If he had eaten a piece of cake, or any thing else, in which there was the least mixture of any such liquors, he was sure to be disordered by it. Water, therefore, was his constant, and almost his only liquor. But, notwithstanding his temperance, his sedentary course of life brought upon him both the gout and the gravel, which he justly called the *rack and torture of life*.” And again, there is a fact more conclusive, be-

* Dr. Harle, of Newcastle.

cause it is less limited. In the above case, it may be objected that there was a strong *hereditary* predisposition to the disease, which did not require the co-operation of the all-powerful cause of intemperance in drinking. This would be their best apology, but even this could go no farther than to prove the *power* of intemperance; it could not give a *specific action*. But in the case presently to be mentioned, *no such subterfuge* will do; for, instead of the case of a single individual, we have that of a whole nation. Prosper Alpinus, who resided some years in Egypt, gives an account that the Egyptians lived entirely upon *vegetable food*, and generally drank *water*, yet no people were more subject to gout.

Thus then we see that intemperance is by no means the *sole* cause of gout. We are, however, very far from wishing to reject it entirely as a cause of this disease; among these it should hold the highest rank. It is the most common, as it is the most powerful. The excessive use of fermented liquors is absolutely necessary to that form of the disease which affects the ligaments and muscles. This may serve to explain the fact, that gout so seldom appears in the extremities of women, who have it in other forms more frequently than men in the ratio of ten to one*. It appears in them in the form of head-ache, dyspepsia, hysteria, &c. I might here go *on* to explain the cause why women are more subject to gout than men, and, why it should assume a particular appearance in them: but this would be foreign to our purpose.

Let us now see how far we are supported by facts in the assertion that the causes of gout and rheumatism are the same.

Here we feel ourselves supported by the evidences of our opponents. First, we will quote the authority of the illustrious Cullen, as he holds the first rank among nosological writers. This great man has ~~never~~ ^{most} unquestionably acknowledged, that the same cause which produces gout can bring on other diseases. These are his words: "There are many instances of persons who had for curing the gout

* This opinion is held and supported by many authors, but particularly by professors Rush and Barton.

taken to a milk and vegetable diet for some time, and after being relieved by it, had returned to a fuller diet, which not only brought back the gout with more violence than before, but occasioned various *other disorders* in their bodies." Here the only cause of disease that I can discover, is debility*, from low diet. And 2d, the stimulus of high living (fuller diet) after this low diet. Causes more simple in their nature cannot be conceived of; yet we find them giving rise to "various disorders." If exactly the same causes produce gout, with many other diseases, we will venture to say that rheumatism is one of these, for I believe no two diseases are more nearly allied. We have proved then, by the authority of Cullen, that the causes of *gout* and *rheumatism may be the same*.

Dr. Quincey† has an observation not inapplicable to the subject before us. "Why," says this author, "rheumatism and hysterical affections are frequently forerunners of gout in the female sex is, because these disorders are from the same peccant matter as the gout." Though I can form no idea of his "peccant matter," yet I can readily believe the fact, that the same cause produces all of them. And, indeed, on this occasion it is of no consequence what the nature of the cause is supposed to be: whether peccant matter, morbid matter, crude humours, or specific action. It is sufficient for our purpose to know it is the same in all.

This remark is interesting in a twofold view. First, because it is an acknowledgment (by a very intelligent author) of the very thing for which we are contending, namely, the unity of the causes of gout and rheumatism. Secondly, it proves (what can be proved by facts alone) that gout slowly supervening will pass over the lower grades of disease, and at length arrive at that which all authors agree in calling gout. The following facts will prove the same thing. In the works of Dr. Darwin, we find the case of the Rev. R. W. who in his youth had lived pretty freely, and of course had his system highly excited: but he was young and of a good constitution. In this state of things he slept one night in wet sheets. This, as was to be expected, brought on a violent attack of the

* Debility with accumulated excitability.

† Treatise on Gout.

rheumatism; the disease was soon removed, but it continued to return for three successive years: after that time however it did not appear again. His health continued pretty good for some time, when, from the ordinary causes of his rheumatism (his system being now greatly debilitated), he had an attack of what his physician called gout.

Two explanations may be given of this case. 1st, The disease changed from a lower to a higher grade, in consequence of there being greater debility in the latter case; or it may be understood by the following analogy. It is a principle in medicine well established, that all stimuli have a greater effect after their use has been for a while suspended; and the same thing is true as it regards the introduction of a disease, for here, though the debility is the same, yet the occasional cause is magnified, by being for a time withheld, which will amount to the same thing. Thus, predisposing debility, which at one time ended in rheumatism, at another, being acted on by a more powerful cause, terminated in gout.

Again, Dawson tells us that inflammatory diseases, as rheumatism, pleurisy, quinsy, &c. generally precede a regular and perfect fit of the gout.

All these things show that rheumatism does end in gout. And is this more wonderful than that dysentery and pleurisy should end in a yellow suffusion of the skin, or with black vomit? That this last often happens is notorious to every one, who has attended to the symptoms of this disease during an epidemic bilious fever. When, however, these symptoms which mark so strongly a yellow fever occur, no matter under what cover, whether dysentery, pleurisy, rheumatism, or gout, yet the disease is constantly considered as a case of yellow fever. Why then may we not regard gout and rheumatism as one form of disease, seeing that they in like manner end in each other?

We have said that rheumatism ends in gout; this, it is true, is not always the case; any irregularity, however, in this respect cannot be urged as an objection to the general principle. Thus, should gout come on without having assumed the form of rheumatism, we are

not on that account to consider their natures as distinct. For no more takes place here than often happens in the ordinary production of disease, as has been explained by our illustrious professor of the institutes of medicine. For instance, a disease may come on with all its causes* being regular and observable, or with one or more of them being imperceptible.

We might here delay, for the purpose of showing that every affection of the extremities called gouty, is but a case of rheumatism. Its causes, seats, symptoms, effects, and cure, are the same. But this would be a digression.

In Dr. Warner's Treatise on the Gout, we meet with the following observation. The matter which makes the gout is not only the cause of many other disorders in the nerves, before it is formed into regular fits, but afterwards these fits occasion such a concussion in the whole nervous system, as to expel with the gouty matter a great deal that is the parent of other mischiefs. Was this nosologist aware of the broad construction that was capable of being placed on this remark? Was he aware that it was giving up entirely that argument against the unity of disease which he with other systematic writers would derive from a diversity of causes? For what does he say? That the same cause in a less degree than was sufficient to bring on the gout, produced various other disorders†. From this it evidently appears, that he admitted different diseases to arise from the same cause. If the same cause can produce different effects, I would ask, in accounting for this diversity of effect, what need have we of calling in the aid of a plurality of causes? Thus do we see the futility of naming diseases‡ according to their causes, and thus too do we ever find the principles of nosology at war with each other.

* The professor, speaking of the phenomena of the attack of a disease, says, morbid action sometimes leaps over predisposing ^{debility} and all the intermediate links ^{ends in} to death.

† Head-ache, vertigo, palsy, apoplexy, &c.

‡ The reader is once for all informed, that wherever the term diseases occurs, it is to be understood as meaning nothing but different forms of the same disease.

This author speaks of ophthalmia and erysipelas (among others) as being brought on by this "gouty matter." The fact is true and important, though the theory intended to explain it is false: for I believe no person at this time will talk of "an ophthalmic, or erysipelatous matter" as the proximate cause of these diseases. The explanation of this fact cannot be given on the principles of a morbid matter, &c. yet how easy is it, when we consider the proximate cause* of all disease as a unit?

One of the most common causes of these, as of many other forms of disease, such as quinsy, pleurisy, nephritis, palsy, apoplexy, &c. is the alternate exposure to heat and cold. See the simplicity of nature! she does not needlessly multiply the instruments of her operations. Why then should we attempt to tread a path (a crooked one too) to which she has not pointed? The above fact will explain the cause of all these forms of disease appearing almost exclusively in the fall and spring.

We find even Dr. Cullen enumerating cold as one of the occasional causes of gout. We do not, however, find him distinguishing between this gout, and that brought on by excess in venery, by intemperance, or by indigestion. No; whatever might have been the cause of the disease, he considers its nature (when it assumes particular appearances) as a unit. Now we shall afterwards see nosologists entirely disregarding the appearances and symptoms of disease, and trusting to the cause alone as a guide to its nature. How inconsistent! how absurd is this!

It may be objected to this†, however, that the application of cold alone is sufficient to produce rheumatism, whereas to bring on gout it requires the co-operation of some other cause. I will readily grant that this is the case: that *some other cause* besides the application of cold is necessary to the production of gout; but this cause is nothing peculiar in its nature to gout. It is debility, the predisposing cause of all disease‡.

* Morbid action.

† That cold produces both.

‡ There is nothing specific in this cause; it is merely a higher grade of the same cause. The reason why, of two patients exposed to the same degree of

Having seen that the same causes produce gout and rheumatism, we shall proceed to another division of the subject: namely, to show that each of them is produced by very *different causes**. It has already appeared that intemperance is a cause of gout, and there are facts innumerable to prove that a sedentary life, great exercise of the mind, domestic cares, vexation, great bodily labour, &c. do often bring it on. Even mineral substances, as *lead*, have often produced gout. I will introduce the following fact; first, because it proves the truth of the above assertion, and secondly, because it will show the inconsistency of naming diseases from their causes. Dr. Dawson (whom I before had occasion to mention), in his Treatise on the Gout, relates many instances of lead bringing on the disease. In one case the disease made its first attack on the bowels (from which, however, it was soon translated to the extremities), when he called it gout. Now, consistent with those laws of nosology which stamp the name of a disease from its symptoms and seats, the disease before us should, in its commencement, most unquestionably have been called colica pictonum, diarrhœa, or dysentery†, and at length (as has been done) get the name of gout. What would be the consequence? That the identical cause which produced cholera, diarrhœa, &c. a little after brought on gout. Where, then, is the

cold, the one shall have gout, the other rheumatism, is evidently this: he that gets the gout has been debilitated before; this, combined with the debility from cold (with the accumulation of excitability which will attend it), must produce a higher grade of disease than this last can of itself possibly produce: but the patient, who becomes affected with rheumatism, laboured under no debility prior to this; his grade of disease, then, is such *only* as the cold of *itself* can give rise to.

* We are not unmindful here of the position taken by us elsewhere, "that stimulus is the only remote cause of disease." If this were granted, our point would be carried at once; for if nosologists admit the cause of all disease to be the same, they certainly would cease to divide them from a *difference* of cause. In this case then we chuse to take them upon their own ground, viz. that the causes of disease are different.

† For it certainly had the seat and all the symptoms of these.

merit in saying, that diseases are different because their causes are so, since different diseases have the same cause?

But, besides this, every one who has read a single practical author, must know that lead produces rheumatism: the very thing we wish for; for it is another instance of gout and rheumatism having exactly the same cause.

I conceive that those who rest the controversy on the principle of *diversity of cause producing diversity of effect*, will have the liberality to admit that *a unity of effect must flow from a unity of cause**. Let us apply this. In the first place, is any nosologist ready to acknowledge that intermittent fever, goitre, and hepatitis, are the same disease? I apprehend there is not. Yet the two last of these are said, by a most ingenious author of our day, to be derived from *exactly* the same causes. But further, the inhabitants of Iceland, who were exposed to precisely the same causes of disease, were variously affected; some with intermittent fever, some with goitre, and others with hepatitis. The following case, which in the course of the winter has come under my own observation, will serve very well to illustrate this position. A lady of this city exposed herself by standing for a short time on a wet floor, with thin shoes. At first she felt no inconvenience from it; in the course of the night however she awoke with a most violent pain in her side, attended with a difficulty of breathing. In the morning a physician was called, who very properly prescribed for pleurisy (for it was fever with the local affection—which constitutes pleurisy). By the depleting plan the disease was in a few days removed, and the patient became convalescent. This favourable state of things, however, did not long continue; for the patient soon began to complain of uneasiness and pain in the lower extremities, and a considerable swelling of the parts was observable, so much so, as to induce some,

* Who ever thinks of finding names for all the different grades of disease produced by opium, or any other poison? Whether it appear in the form of spasm of the stomach, vertigo, convulsion, or all these combined, is it not yet the same disease, varying only in force, and that too from the magnitude of the cause?

who witnessed it, to pronounce it a case of dropsy*. The pains were fluctuating—in short, it bore every mark of a case of acute rheumatism. Here, then, we have the same cause in the same person, producing pleurisy and producing rheumatism†.

Let us examine this case. The cause here is a unit; that the effects then should vary, the matter to be acted on must be different. If now we are able to show that this difference of matter is not necessary to explain the phenomena of the case before us, I conceive we shall be justified in asserting, that the effect also is a unit; that is to say, this disease was the same when it attacked the pleura, as when it affected the limbs. In the first place, then, why is this affection determined at one moment to the lungs, at another to the extremities? I answer, it is from the presence of the same cause, and not from the presence of specific causes in these parts. This cause is local debility. How this debility should produce disease in a part, will be fully explained by the following proposition. Suppose I immerse one hand into a frigorific mixture, and expose both hands immediately after to the same degree of heat; that hand which had been the subject of this experiment will become painful, inflamed, and will swell, while the other will remain quite unaffected by the heat. Here heat is the exciting cause; what is the predisposing? Nothing peculiar in its nature surely; for who will believe that cold has the power of introducing something *specific* into the part which shall dispose it to take on disease? Simple debility then, and not any specific effect of cold, is the predisposing cause.

It is now shown that debility does exist in the part; will it be asked, why this should invite the disease thither? Because that part is in consequence of its *loss of power* least able to withstand the force of impressions made on it; just as the weak in battle, *ceteris paribus*, suffer most,

* And why not? If there was fever, and an effusion of serum, (which was very probable), what was wanting to make it a case of dropsy? Nothing.

† And we *might* say dropsy. We are here using the language of nosology, for with us all these are but forms of the same thing.

It appears to me, that with those, who have laboured to affix a specific name and character to a disease, from the nature of its cause, it would have been quite as consistent to attempt the same thing with each symptom of disease: this would be nothing more than an extension of their own principles. Thus they should have an appropriate name for head-ache, as it occurs in gout, in rheumatism, in intermittent and yellow fevers, &c. for as (according to them) the diseases which produced the head-ache are different; and as different causes cannot produce the same effect, it follows that these *head-aches* are in their nature different. This being the case, how wonderful is it to find nosologists prescribing the same method of cure for all these affections of the head*!

An absurdity must follow one way or the other. If they contend that the causes are different, it will be ridiculous to say, that the affection is the same; and (since they assert that the cure of a disease depends on its nature) if they do not admit a unity of affection, how absurd will be a unity of cure!

From all that has been said above, we may deduce the following inferences:

The cause producing disease either does or does not change its nature. 1st. If the cause has no tendency towards altering the nature of the disease; then, of course, must all objections†, founded on such belief, be false and chimerical. 2nd. But if it be sufficient to fix its nature, then must we have a plurality of gouts; for the causes bringing on gout are as various in themselves as they are different from those of rheumatism. I will close this division of the subject with the following remarks.

In former times all diseases were supposed to depend on a *peculiar humour*. Thus there was a rheumatic, gouty, and nephritic humour, &c. This opinion is now entirely rejected, as not being founded on fact; but it is followed by one not less *ridiculous*. Instead

* Dr. Cleyne, with many other authors, says, when gout has seized on the head, &c. it is to be treated as any other violent head-ache, or as an inflammation of the brain or its membranes.

† To the unity of disease.

of specific humour, the physicians of the present day* cherish a *specific action* in disease ; this, too, as depending upon the variety of cause which produces it. Once for all, I repeat it, cause can give force, and it can give local determination, but it cannot give character. Disease, like combustion, is, under all circumstances, a unit. “From the small artificial volcano of *Limery* to the terrible eruption of Vesuvius, there is no other difference than what consists in the magnitude of the cause†.”

II. *Of the Seats of Gout and Rheumatism.*

AGREEABLY to our arrangement, we are, in the next place, to treat of the seats of these two forms of disease.

From the seats. as from the causes of disease, many arguments have been deduced to support the principles of nosology ; yet, on these, systematics have not placed much reliance, for we often see them (when it suits their purpose to do so) entirely disregarding the seat of a disease, and looking exclusively to the nature of its cause, cure, &c.

We shall divide this subject as we did the former.

1st. Endeavour to show that they often occupy the same seats.

2d. Demonstrate that no disease has always the same seats.

We say, then, that gout and rheumatism are the same in their seats. 1st. Does gout affect the blood-vessels ? so does rheumatism. If it be objected here, that rheumatism often comes on without fever, I answer, that, when this is the case, the disease is local ; it shows that the cause is not sufficient to produce a general affection. I am supported in this assertion by the evidence of the learned Cullen ; he says, that where there is no pyrexia, the pain is generally confined to one joint, but when any considerable pyrexia is present, it commonly happens that the pain affects several joints

* There are certainly many exceptions.

† Chaptall.

at the same time. The presence of fever, then, only proves the disease to be more extensively diffused through the system. But admit that it does more, admit that its presence or absence proves the disease to be different, and the consequence will be, that rheumatism, with many other diseases, differs from itself, for they exist with and without fever. This argument, then, would prove more than those who should advance it would have it do.

2d. Does gout attack the extremities of the body? so does rheumatism.

3d. Does gout affect the joints with pain, inflammation, &c.? so also does rheumatism. Wallis, who dwells much on their seats, admits, that they both affect the joints, but in a different manner: "For," says he, "the muscles, their common membrane, and the tendons are affected with violent pain in rheumatism; but, in gout, the tendinous, nervous ligaments, and even the periosteum are more violently affected." I know not how far this assertion is founded on fact, but I am disposed to believe, that we should lose nothing by admitting it to be true. We will therefore go on the supposition of its truth, taking him on his own ground. Nothing can be more exactly in point, towards refuting this objection, than the following analogy, and analogical argument should not be rejected when unopposed by facts, and when it is the best that the nature of the case admits of. There is an affection of the fingers of the hands, called paronychia, or whitloe; surgeons make this disease to have four situations in the integuments of the fingers, viz. 1st, between the epidermis and true skin; 2d, between the true skin and theca of the finger; 3d, between the theca and periosteum; lastly, under the periosteum; they however do not suppose its nature to be different, because it has this diversity of situation. Its force is unquestionably affected by it, but not its nature. Now the symptoms of pain and inflammation which happen in the joints of gouty patients, are no more the effect of specific action, than are those symptoms which constitute whitloe. In both cases it is morbid action, of the inflammatory kind, with a local determination. We

do therefore assert, that gouty and rheumatic affections of the joints differ in no respect but in grade.

On this subject of the joints it is also objected, that gout affects the smaller joints, as the fingers, toes, &c. while rheumatism attacks the larger limbs. The following case (were it necessary, many others might be adduced), recorded by Van Sweiten, is of itself sufficient to refute this objection. "A young girl of fashion having exposed herself, when heated, to the night air and dews, on the following day felt great pain in her neck, which soon after spread over her whole body, sometimes (wandering after a strange manner) it seized her feet, then her elbows, and the fingers of her hands."

Much has been said about the great toe, as the particular seat of the gout; as well might we place yellow fever exclusively in the stomach, or small-pox in the skin. I would ask, how by this specific action can the following phenomenon be explained? The celebrated Hoffman tells us, "that he has sometimes observed from a rather tight ligature suffered to remain for twenty-four hours on the foot after venesection, on account of the orifice being pretty large, a pain to seize the joints of the feet, particularly the *great toe*, in the same manner as the gout, which continued troublesome for several days." This very case occurred to Hoffman himself.

Here no body will imagine, that the great toe was affected by virtue of any specific action; how absurd then is it to call in the aid of such an action to account for gout attacking this part particularly!

4th. Is the brain ever the seat of the gout? Every body knows, that hemicrania is a frequent symptom of rheumatism; but further, rheumatism has actually affected the brain. The daughter of Dr. M**** had rheumatism, which alternated three successive times with mania. I cannot have the least hesitation in believing, that this was the same disease in different livery.

Baron Storck mentions a case of death from rheumatism, in which one of the ventricles of the brain was found full of a yellowish jelly.

5th. The parts about the sacrum are alike affected by both. Coiterus says, he had found the space betwixt the lower part of the spinal marrow and its dura mater, to be "frequently filled with a thin serum in *arthritic*, ischiadic, and podagric patients, and sometimes with a viscid pituita." This shows that gout does affect these parts; and that this is often a seat of rheumatism, is notorious to every one.

As an objection to the sameness of their seats, it may be said (and it is what we shall not deny) that rheumatism never affects the nerves. There is no greater difference here, than is observable between hysteria and hypochondriasis; the former appears in the muscles and nerves, while the latter affects these with the blood-vessels: nor are they more different in this respect, than a mild bilious fever and yellow fever, or an intermittent fever and yellow fever: while the former is confined to the blood-vessels and bones*, the latter lays hold of the stomach, blood-vessels, liver, brain, and, in short, almost the whole body; yet every body is ready to admit, that intermittent and yellow fever are the same disease, varying only in force.

6th. Does gout affect the muscles? Dr. Stoll describes a case of episthotonos from it. Rheumatism certainly does fix on the muscles; this is admitted by Dr. Cullen; and Baron Storck, of Vienna, relates the case of a rheumatic patient, in whom there was "universal stiffness, even to tetanus." In this respect, then, we see gout and rheumatism meeting in a point, exactly.

7th. They both affect the cartilages. Dr. Rush mentions an instance of gout fixing on the lobe of the ear, and Van Sweiten relates a similar one of rheumatism.

From the above view, it appears, that their seats are the same. If, then, the seats of disease be deemed sufficient to stamp a specific nature on it, we claim a unity of nature for gout and rheumatism.

* An intermittent fever, which prevailed some years ago in Virginia, affected the bones so violently, that from thence it got the name of "break-bone fever."

But we are next to examine into the propriety of naming disease from its seats.

We have said, that most authors have laboured to draw a line of distinction between diseases, from the diversity of their seats: and in no instance have they relied with more confidence on the strength of this argument, than in their labours to disprove the unity of gout and rheumatism. They have thought that this alone was sufficient to establish a difference in their nature. This is one error springing out of another. They had seen gout frequently (generally) attacking the *great toe*—rheumatism never. From this circumstance they were led to believe that the *great toe was the throne of the gout*. This then was their polar star, but finding that both of these diseases at different times took very different stands, they were obliged to enlarge their *geography* of disease. Dr. Cullen admits an irregular, a misplaced, and a retrocedent gout, and in this he is followed by many other authors. With just the same propriety might we distribute yellow fever into different classes, as it affects the blood-vessels, stomach, liver, head, &c. and thereby have an irregular, retrocedent, and misplaced yellow fever.

If it be asked to give the reason, why gout and rheumatism should particularly attack the joints? I answer, it is because there is a local debility, which invites the disease thither, and that there is nothing specific determining particularly to these parts*. I say there is local debility; for consult the writings of any author, who has attempted to explain this fact, and you will find nothing mentioned but such causes as, we well know, do produce such debility; these are, the great exposure of the parts to heat and cold, the smallness of their blood-vessels, remote situation from the heart, and their exercise disproportioned to that of other parts.

The history of the following case, from Dr. Darwin, will show, in strong colours, the inconsistency of naming disease from its situation. A certain lady was most violently affected with hemicrania, brought on by a decayed tooth. The extraction of the tooth, with other re-

* All this has been elsewhere explained.

medies soon removed this affection; in a few weeks, however, the patient suffered a paralytic stroke, and was entirely relieved of the pain in the head, which had now returned. These were certainly different forms of the same affection. For why may not the same disease at one time appear in the form of tooth-ache, and at another take on the shape of hemicrania or palsy, as that gout should assume the appearance of pleurisy, cholic, dysentery, &c.? I can see no difference. Though systematics declare, that gout is the same under all these circumstances, yet they will not agree to call the disease before us by a single name, "Odontalgia." Why not? It has a single cause (for no new one is mentioned), and in its seats, it is as much a unit as the gout is. How contradictory, in this respect, are the principles of nosology!

Upon the whole, then, since different diseases occupy the same seats, and the same disease different seats; where is the propriety of distinguishing between them from this circumstance? There is none. As well might we attempt to distribute the clouds into different classes, as they take different situations in the heavens, as name a disease from the seat it occupies!

Wind is but a commotion of the atmosphere; it is the same in *its nature* whether it blow from the north or south, east or west; it is true it has different names, but by these a difference of *situation* not of *nature* is understood.

III. Of the Symptoms of Gout and Rheumatism.

GOUT and rheumatism resemble each other in no respect more than in their symptoms; in this they are as closely connected, as any two forms of disease can be.

To show how far the same symptoms are common to both, we will here mention a few of the most prominent of them.

1st. From what was said under the preceding head, it appears, that *fever* may be justly considered as a common symptom.

2d. They are *both* particularly disposed to affect the limbs with *pain, inflammation, and swelling*.

3d. *A fluctuating pain*, removing suddenly from one part to another, is a symptom common to both.

4th. Each of them observes stated periodical returns. That this assertion is correct as it relates to gout, is so evident, as not to require proof. That it is true as it concerns rheumatism, will appear from the following circumstance:—Van Sweiten relates the case of a woman, who, having exposed herself to the night air and dew, became affected with rheumatism; of this attack, however, she was soon cured, but ever after, at the same time of the year, she had a *regular* return of the disease. The immortal Sydenham had an eye to the same thing; he says, “it frequently happens, when the patient has been unskilfully treated, that he is severely afflicted during life with flying pains, which are at some times violent, and at others more gentle.” To this account it may not be amiss to subjoin the following remark of the same illustrious author, as it will afford another instance of the affinity of these forms of disease. “When,” says he, “the gout seizes a person far advanced in years, for the first time, it never has such stated periods, nor proves so violent, as when it attacks a younger person.” This observation may be applied with equal propriety to rheumatism. We have said elsewhere, that debility is the predisposing cause of all disease; this, compared with the fact above-mentioned, would *seem* to be an inconsistency: for here, though the debility is *greater*, the disease is *less violent*. An explanation, therefore, becomes proper. Three things are necessary to the production of disease, 1st, *debility*; 2d, *accumulated excitability*; and 3d, *an irritant or exciting cause*. The greater the debility present, the more *liable* is the system to disease, but not the more violent that disease; it is the degree of accumulation of the excitability that gives *force*. Now with the debility which is incident to old age, there is an *exhaustion* of the excitability of the system, whereas, with that debility which takes place in youth, there is an *accumulation* of excitability. In the former case, both excitement and excitability are *exhausted*, the system is

therefore unable to re-act, or rather, the disease has nothing to act on.

5th. The following relation, by Dr. Rush, shows a most marked resemblance between these diseases. This observer (than whom there is none more acute) of the operations of nature in the production of disease, informs us, that the gout sometimes passes by the blood-vessels, ligaments, and muscles, and invades at once the liver, bowels, and brain. Again, he says, the morbid action induced by the usual causes of rheumatism, affect, though less frequently, the lungs, the trachea, the head, the bowels, and even the heart, as well as the gout. These observations are supported by the authority of many authors beside. It may not be amiss here to hint at the sameness of the symptoms which mark these diseases when thus translated.

Rheumatism (like gout), translated to the stomach, produces pain, nausea and vomiting; to the intestines, diarrhœa and dysentery; to the heart, dyspnœa: to the lungs, a true peripneumony; to the head, heaviness, confusion and giddiness.

6th. Dr. Rush has seen cases of ophthalmia* from gout, and I have witnessed one in which rheumatism most evidently alternated with ophthalmia.

7th. The following fact will serve to show the great analogy between their symptoms. Henry Young was admitted into the Pennsylvania hospital during the winter, with acute rheumatism; he was treated with the common remedies for rheumatism; an abscess formed on his breast, after which all pain left his limbs, and his stomach became much affected with *pain* and *acidity*.

From the above, it appears, that the *great* characteristic symptoms of gout and rheumatism are the same. If then a sameness of symptoms can make a sameness of disease, we may venture to pronounce, that gout and rheumatism are the same.

II. But I am much disposed to question the merit of naming disease from its symptoms, seeing that a disease which even noso-

* Medical Inquiries, Vol. V. page 186.

logists themselves agree is a unit, is often marked by a very great diversity of symptoms. Thus, gout, for instance, will at different times assume very different appearances. We have various accounts of its producing coma, vertigo, apoplexy, palsy, loss of memory, and madness in the brain; hysteria, hypochondriasis, and syncope in the nerves, pneumonia in the lungs, diarrhœa, &c. in the bowels. Dr. Rush has seen petechiæ, gangrene, and *black vomit*; and lastly, it appears in the form of *tic doloreaux* or *aura dolorifica*. I cannot conceive of a greater multiplicity of characters than is here. To admit this, and yet, from matter so changeable and contradictory in its nature, to attempt to form fixed and unchangeable principles, is contrary to reason and common sense.

I think, whoever will call to mind all the symptoms that constitute the above diseases, and recollect that they are here enumerated as making a part of gout, will not hesitate to declare, that such cases of gout (if we regard the symptoms) are more unlike the ordinary appearance of this disease, than this last is unlike a case of rheumatism. How inconsistent, then, of these three appearances of disease to give *one name* to the two least like each other!

III. How very changeable and uncertain the symptoms of disease are, and of course how ill calculated to give birth to any fixed principles in medicine, the following facts and observations will serve to show.

The great Sydenham, speaking of what he calls scorbutic rheumatism, has the following words: "Neither are we ignorant, that as many symptoms, resembling the scurvy, afflict gouty persons after the fit of gout is over; and this is to be understood, not only of the gout, but also of a beginning dropsy."

Again, Van Swieten relates a case of what he named rheumatism, in a young girl, "who in autumn complained of a pain about the top of the *os ilium*; the following day, stooping suddenly to take something from the ground, the pain instantly increased to a violent degree, and presently dispersed itself over the whole right side, leg, and arm, nay, over the right side of the head. Upon being blooded she had an immediate flux of the menses." This case pre-

sents a strong objection to the nosological arrangement of disease ; for, governed by the *symptoms*, this affection should be called rheumatism, but if we regard its *cause* and *effect*, we must consider it as a case of “retained or suppressed menses.” How systematics can get over this palpable contradiction in their doctrine, or how reconcile it, I am at a loss to determine. They cannot do it. In such a dilemma, they are obliged to throw some of the circumstances of the case behind the *curtain*, and select such only as will suit their purpose. Thus, in the case before us, no notice is taken either of the cause* or issue of the disease, the symptoms were thought sufficient ; because, had this author attended to other circumstances, he would have found them at war with each other—symptoms making it *one*, cause and effect *another disease*.

On the other hand, we often find systematics entirely disregarding the *symptoms* of a disease, in their attempts to fix its nature. An observation to be met with in Cullen, will show how little confidence *he* occasionally placed on the symptoms of disease ; it is this : though the disease (gout) may sometimes assume different appearances, yet as he supposes it to depend always upon a certain diathesis or disposition of the system, so every appearance that is perceived to depend upon that same disposition, he considers as a case of gout. This remark is an *indirect* but *positive* acknowledgment of the impropriety of distinguishing disease by its symptoms ; for here, no matter what the symptoms are, it is declared to be a case of *gout*.

The following circumstance will show how very flexible the principles of nosology are. If a patient be attacked with a disease of

* I have no doubt that the stimulus of distention, from the retained menses, was the cause of all these different symptoms ; why it should at first produce no effect on the vessels of the uterus, seems to be, because the force of the stimulus was disproportioned to the power of re-action in these vessels ; that is, they were prostrated. This opinion is supported by the fact, that blood-letting enabled the vessels to throw off the superfluous blood, which never happens unless there is suffocated excitement in the system. I say, then, the vessels of the uterus being unable to take on diseased action, the rest of the system sympathized.

rather doubtful nature (bearing, however, some resemblance to what is called gout), the systematic immediately enquires, "Have you ever had twitching pains in your feet?" If he answer, "Yes," it is sufficient; it instantly has "GOUT" stamped upon it. Now a most ingenious author tells us (and I believe very truly), that there are few persons who have not at some time or other experienced these painful twitches, yet the systematic entirely disregards this symptom, unless he can make it form a feature of gout.

In this, also, will the inconsistency of nosology appear; gout translated to the lungs is said to be a true peripneumony, and is to be treated accordingly; yet when it fixes on the extremities and joints (at which time it certainly has every characteristic of rheumatism), they do not call it rheumatism, but still continue the name of gout.

IV. *Of the Effects of Gout and Rheumatism.*

WE are in the next place to consider these diseases, as regards their effects.

1st. The most obvious effect of both is *inflammation* and *swelling* of the part affected; this, it is true, does not so often occur in gout as in rheumatism; the cause of which, I suppose, must be the greater disposition gout has to remove suddenly from place to place, in this way not remaining long enough in any one part to produce this effect, which requires some time.

2d. The effusion of *coagulating lymph* is a common effect. The nature of these effusions is different in both, according to the parts in which they take place. Thus, when they happen in the kidneys or urinary bladder, the lymph is changed, under certain circumstances, into urinary calculus; in the ligaments and joints this effused matter is converted by stagnation into chalk-stones. We shall not attempt to account for this effusion forming different substances, as it happens in different parts, as this, though it were uniformly the case, could not militate against the truth of the po-

sition we are aiming to establish; we will, however, observe, that the nature of the effused matter is not always the same in the same parts. Morgagni dissected the body of a rustic, ninety years of age, who died of a tertian intermittent fever; in the tunica vaginalis of the right testicle, he found two calculi, in that of the left a great quantity of water. Thus, it appears, that the same parts, from the same cause, contained, the one water, the other calculi.

3d. Both gout and rheumatism sometimes end in suppuration.

4th. They both produce visceral congestions; rheumatism less frequently than gout.

5th. They both produce an effusion of serum, which (when it happens in hollow cavities) forms dropsies. Our illustrious professor of the principles of medicine mentions cases of gout and rheumatism bringing on dropsy; and Baron Storck records the cases of three rheumatic patients, in whom dropsical effusions were discovered after death; in two of them the effusion took place in the cavity of the thorax; in the third, the water was discharged into one of the ventricles of the brain. This is sufficient to prove that dropsical swellings are equally the effect of both.

6th. We are told by Dr. Rush, that *gout* sometimes produces a collection of air instead of water in the cavity of the abdomen; and a German physician, Mediavea, says, he has seen *rheumatism* terminate in hydrops tympanites.

7th. Stiffness and dislocation of the joints follows both these forms of disease, as every one knows.

8th. Gangrene is produced both by gout and by rheumatism. Dr. Rush has seen the muscles of the leg destroyed by a mortification brought on by an attack of the gout. In the dissections of Morgagni we meet with a fact, which shows the same thing to have happened from rheumatism; he tells us, that the muscles about the sacrum of a patient, who had died of the rheumatism, were found in a state of incipient gangrene.

The chalky concretions above-mentioned were formerly considered as an almost infallible proof of the presence of gout. Had the writers of those times extended their researches and observation a

little, they would have found that this *calculous matter* was not peculiar to gout; it is observable in many other diseases, as will appear presently. Calculous concretions were found in the body, and that in the *joints* too, of an old woman, who died of apoplexy*. I do not pretend to say, that these chalk-stones were the effect of apoplexy; yet of this (which is sufficient for our purpose) I am satisfied, that the patient did not labour under *gout*; for had she been afflicted with so violent a disease, it would not have passed unnoticed by this great man; but the truth of this opinion will appear still more evident from hence, that this case was brought forward by Morgagni himself, to show by what different affections this chalky concretion was produced. Hildanus declares that an "infinite number" of these *calculi* were discharged from the lungs of a *consumptive patient*; besides this, dyspnœa, cough, hæmoptoe, asthma, and hectic fever, have been said to produce them.

These concretions are also formed in different parts of the body, and in parts, too, which occasionally contain very different substances. Thus, Morgagni, having dissected the body of a virgin, who died of fever, found water in the abdomen, serum and calculous concretions in the thorax. Further, they have been discovered in the kidneys, liver, intestines, and eye-lids, and both Preusseus and other authors relate cases of their being formed and discharged from an ulcer near the sternum. Morgagni, speaking of all these calculous matters, so variously produced, and in such different places, has the following remark: "These are for the most part like the matter which concretes in the joints of arthritic patients, friable, light, like pumice-stone, chalky, and tophaceous."

In various points of view, we see exactly the *same effects* produced, by what nosologists would call very opposite diseases (and it has been shown elsewhere, that *different effects* can result from the *same causes*). How insufficient, then, must be the effects of disease ~~be~~ towards giving it a fixed and unchangeable character!

* Morgagni.

V. *Of the Cure of Gout and Rheumatism.*

WE have now reached the last, though not the least important division of our subject.

As it is a principle held by nosologists, that disease is a unit, when it arises from the same cause and is cured by the same remedies, it will be sufficient, for our purpose, to prove, that the cure of gout and rheumatism is the same, having already shown the identity of their causes. I say, this is a ground taken by nosologists; the truth of this assertion is discoverable in the writings of almost every systematic, especially in those of Cullen and Sydenham. How far the method of cure for a disease was supposed to go (by this last-mentioned author) towards establishing its nature, will appear from the following circumstance. The latter great man, having given the history of a case of "scorbutic rheumatism," observes, that he was led from its symptoms (especially as it occurred in women, and in men of weak constitutions), to refer it to the hysteric class, yet as it did not yield to anti-hysteric remedies, he thought himself bound to call it rheumatism. Here then the decision, as to the nature of a disease, turned *entirely* on the nature of its cure.

The following remark by C. Aurelianus, might, with propriety, have been introduced elsewhere, but I have chosen to reserve it for this place, as *here* it will serve a double purpose; to show, on the one hand, what great confidence nosologists placed in the cure of a disease, in their attempts to fix its nature; and on the other, how negligent systematics are of the seats of disease, unless it suit their purpose particularly to attend to them. The remark is this: "But we must not contend about names, which seem only to be distinguished according to the difference of situation, yet are understood to be of one property in the cure."

To go through the whole catalogue of remedies, which, at different times, are proper to be exhibited in these forms of disease, would

swell this essay far beyond its proper limits ; neither is it necessary : for should I now, after having laboured to prove that their nature is the same, hesitate for a moment to deny that there is any class of remedies *peculiarly* adapted to either, I should be guilty of the highest inconsistency. As I consider gout and rheumatism to be the same disease, varying only in its grade, the only diversity of cure will be such as this different force of disease may require.

As I would prescribe for the *symptoms* of disease, without any regard to its name, and as it has been shown, that the symptoms of gout and rheumatism are often the same, it follows, that exactly the same method of cure is to be observed in both. The plan of treatment, which the principles I hold would lead me to adopt, may be summed up in a few words. In these, as in all other forms of disease, I would deplete when I believed there was great morbid action in the system, and stimulate when this action was weak. In rheumatism, in gout, in yellow fever, in every other disease, I would bleed, in an active or depressed* pulse, and stimulate where the reverse was the case, without the least regard to name, specific action, or matter. The truth of this principle is unquestionably established by the following important fact : A lady in this city had taken a large dose of opium, for the purpose of destroying herself. Soon afterwards Dr. Rush was called in ; he immediately attempted, by means of emetics, and by a feather thrust down the fauces, to bring on vomiting ; but after many ineffectual attempts to procure a discharge of the opium from the stomach, he resolved no longer to regard the cause of the disease, but (governed by the principles of medicine which he had adopted) to proceed to its cure with reference to the symptoms alone ; when he found the pulse full and active, he advised depletion ; when it languished, he gave stimulants. Thus, without regard to any *specific cause, name, or nature*, and having a

* There is a distinction made by some authors between a *depressed* and *oppressed* pulse ; the latter is a pulse of debility, the former of prostration. By too forcible impression the system does not re-act,

view to nothing but the state of the system, did he check the rapid progress of this affection towards death.

Though I decline entering particularly on the consideration of the remedies for gout and rheumatism, yet to remove a *seeming* objection to the position taken by us, it is proper that I should speak particularly of *one* of these remedies: the remedy to which I allude is blood-letting. Most authors recommend this in recent cases of gout, but it is no less a true than common observation, that its use is often improper in this disease, even when (governed by the ordinary indications for the use of the lancet) we should be strongly prompted to pursue this plan*; and, in this respect, does the cure of gout differ from that of rheumatism, for this delusion never occurs in the latter. This objection, at first sight, seems plausible enough, but if it be examined into, it will be found without merit. Whenever this state of gout occurs, I imagine it is in such persons as have, what Dr. Rush has very happily called the "soap-bubble excitement†." This excitement is generally, though not always, the effect of intemperance; but, neither this kind of excitement, nor this caution in the use of blood-letting, is peculiar to gouty patients: it is especially observable in the diseases of drunkards; hence we are particularly cautioned against the too hasty use of blood-letting in pleurisy, hepatitis, &c. as they occur in such patients. From this it appears, that this phenomenon may be explained without referring it to any specific action in gout. It is the effect of a cause, which, with gout, gives rise to many other forms of disease.

With this *little* exception, then, I consider the *general* plan of cure for the gout and rheumatism as the same.

Having already shown the very close analogy which obtains between these diseases, as it regards their *symptoms* and *seats*, it is

* Dr. Barton has seen venesection produce evident ill effects, when the state of the system *seemed* to call aloud for its use.

† It is obvious why this kind of excitement should forbid the use of the lancet.

hardly necessary to say, that the *local remedies* likewise must be the same. While I am on the subject of local remedies, it may not be amiss to give the following relation of a fact, from Baron Storck, both as it proves the success of the same remedy in them, and as it affords a case of rheumatism in which the analogy between these diseases will most strikingly appear. This author tells us, that he saw a case of rheumatism, in which the disease was, at first, seated in the joints of the hands and feet ; at length, however, it became diffused through the whole body, affecting the eyes and breast particularly. He then observes, " Strong sinapisms were applied to the hands and feet : in less than half an hour's time, a violent pain settled on the knees, and wrists, and the danger of suffocation was immediately lessened." What a marked resemblance do we observe here ! the very same remedy produced, in rheumatism, exactly the same effect that it did in gout, to wit, brought back the disease from internal parts, to the external ones first affected.

Having shown that the cure of gout and rheumatism is the same, we claim for them all that this argument is supposed to prove ; that is to say, if the cure of a disease have any hand in establishing its nature, we will venture to infer, that the subjects of this essay are in their nature a perfect unit.

We have now considered gout and rheumatism under every view that can be taken of them ; 1st, regarding such things as related to their causes ; 2d, to their seats ; 3d, to their symptoms ; 4th, to their effects ; and, lastly, to their cure. After all of these, we have thought ourselves justified in drawing the inference, the truth of which it has been the object of this essay to establish.

I have now brought this essay to a conclusion. No one can be more sensible than I am myself, of its very numerous imperfections ; for these, in justice to my own feelings, I must offer some apology. I shall say nothing of my youth and inexperience ; they

are pleas worn out by use ; I will only observe, that it was written in a few days, and after the excitement of my mind and body had been very much reduced by the studies of the previous winter, and the solicitude which accompanies the examinations, previous to receiving the honours of the university.

THE END.

